

### "Curing Pea Vine Hay"—Inquiries Answered.

correspondence of The Progressive Farmer.

My article on curing peavine hay has brought such a large number of inquiries that I shall have to answer them in a general way.

First, as to time of mowing the vines: We usually mow after the vine matures well and some peas are dry. The vines are then easier to cure than if cut while younger and sappier. If cut earlier, say just as the peas begin to form good, I should stack them as fast as cut, as I do the mature vines. But in addition to the two strips of wood nailed cross-shape to the pole a foot above the ground to keep the vines from being harmed by too close contact with the earth, I should nail two more also cross-shape about half way up the pole. This would keep the stack from setting too close, leaving them open to dry out faster.

The poles should be about ten feet high and set in the ground at least one foot deep, or deep enough to prevent the wind from blowing over the stack.

Do not trample the vines in stack. Let them settle by their own weight as thrown up. Let the vines be the height of the poles or a little less. Slope off at the top to shed water as well as possible.

It is best to shred as soon as the vines are dry enough. The time necessary to cure will depend altogether upon the dryness or wetness of the weather. The stack will heat at first and then gradually dry out. If shredding is not intended they should be housed as soon as cured to be fed as needed. Some leave them in the stack during the winter till needed. This is a most wasteful thing to do. For the pea hay being stalky and to some extent open to rain in the stack deteriorates more than any other kind of hay from exposure.

The Star Pea Machine Company makes an absolutely perfect implement. It shreds the vines and threshes the peas all at once.

O. W. BLACKNALL.

Vance Co., N. C.

### Dr. Tait Butler on Southern Stock Raising.

Dr. Tait Butler, Veterinarian of the North Carolina Board of Agriculture, attended the South Carolina State Farmers' Institute held at Clemson College two or three weeks ago, and delivered an able address on the live stock industry. The Greenville Cotton Plant gives the following report of it:

He first spoke of the necessity of the live stock industry in the South. He compared favorably the land of the South with lands in the North and West. He said that no farming operations or system is ever entirely successful permanently unless the main idea was to raise food products and feed to stock. He drew attention to the fact that Southern cattle are as healthy as cattle anywhere and disease is of little consideration.

He next spoke of grasses as bearing on stock raising. The system of

using cotton seed is very wasteful and the loss amounted last year to \$50,000,000. Cotton seed meal is worth \$35 a ton as feed and when it is used as fertilizers, at present prices, great loss in money value results.

He also spoke of some of the obstacles to raising stock in the South and said that in order to have stock we must have men educated in that direction. He criticized the fact that he saw no well-equipped agricultural building here, while very fine buildings for other sciences existed, and he censured the trustees for their remissness in the matter. His remarks drew forth considerable applause.

He showed that cattle were selling higher than usual and would probably continue high, and predicted that cotton seed meal would never be cheap again, because it is worth \$35 a ton for feed.

He emphasized the importance of the farmers getting agricultural education, and proceeded to show some things specially needed. He showed from his own observation that many stock owners do not know whether they have well bred or bad stock because of lack of knowledge in these subjects. All stock must be bred for some special purpose. A cow bred for milking uses is not expected to make a good beef-type and an animal bred specially for beef is not a good milk type. He told of two steers—one Jersey and one Hereford—that were tested in Ohio. The expense of fattening was practically the same. The Jersey, weighing 1,000 pounds at three years old, brought little over four cents a pound, the Hereford little over six cents a pound. The Jersey dressed 57½ per cent net, the other 67½ per cent net. Jersey made tallow 190 pounds; Hereford made 90 pounds tallow. Tallow being worth only 3 or 4 cents a pound and beef a good deal more, made the difference in favor of the Hereford marked on this item alone, so this test very strikingly illustrated the importance of breeding the different types for the purpose for which any particular type is wanted.

His next subject was the cattle tick, which he considers the worst obstacle to stock raising in the South.

More cattle die in South Carolina from Texas fever than from all other diseases combined.

An easy way to get rid of these ticks is to separate an infected pasture from one not infected by a very low plank fence a few inches high. This can be done because the tick will not crawl or move on ground more than a few feet, and will not cross a plank eight or ten inches high.

The female tick will lay 1,500 to 3,000 eggs, which will hatch in warm weather in two or three weeks. The tick does not crawl from one tick to another. Young ticks will not usually live through the winter, but eggs will keep and hatch next spring.

North Carolina is expending \$7,000 or \$8,000 a year in exterminating the ticks.

In September we should take cattle out of tick infested pastures and cleanse them thoroughly of ticks and put cattle into clean fields.

Another plan is to grease the cattle once a week and ticks will be destroyed. Grease the legs and under portions of the body. Any cheap grease, with a little kerosene, is good.

### Keeping the Winter Vegetables.

Correspondence of The Progressive Farmer.

Whether for later markets or home use, it pays to store the winter vegetables with due regard to their keeping so well as that little loss as possible will be experienced in rotting or shrinking. The hardest thing on winter vegetables or fruits is the frequent change in the temperature. The first condition aimed at is, therefore, a uniform temperature. It matters not if this temperature is very low, almost to the freezing point, so long as it is maintained. Alternate freezing and thawing will spoil the best of vegetables. Usually winter vegetables are stored in cellars, pits, barns or sheds, and they keep somewhat indifferently in any one, unless special attention is given to them. Most cellars are too damp and warm to suit vegetables. A lower and dryer temperature is needed, and this can be obtained by giving better ventilation. Cellars that have no ventilation cannot have pure air. The air becomes heavy with the moisture that evaporates from the vegetables, and this in turn affects the stored goods. An outside ventilation is absolutely necessary for a good vegetable cellar. When the weather is wet this should be closed, or when the temperature is very low. In this way the moisture and cold can be regulated to suit the needs of the goods.

Most root crops, except onions and potatoes, should not only be kept in such a dry cellar, but they will do better if packed in bins or barrels and covered with dry sand. Turnips, carrots, beets, parsnips and similar vegetables will in this way retain their plumpness and juiciness. Indeed, they can be kept so that they will practically be as good as when first dug from the earth. Now all these vegetables in the middle of winter are in demand, and command good prices, but most of them are so shrunk and shriveled that they do not pass muster. It is by storing them properly that we are able to meet the requirements of the market at our own profit. Cabbage in particular need to be packed away in dry sand or earth immediately after digging so they will lose none of their good qualities. They should be kept where the temperature cannot vary a degree until taken up for the market. In some respects onions are most generally small and shrunk of all winter vegetables. This is due to the fact that they are kept in too warm places, where they dry out and even begin to sprout. They should be stored away where they will stay almost to the freezing point until ready to sell. Then they will command winter prices for fancy onions, which are the best and highest that can be obtained at any time of the year.

WILLIAM O. BELIOTT.

### EFFECTS OF FARM MACHINERY ON AGRICULTURE AND CIVILIZATION.

The Essay Which Won the Two-Horse Mowing Machine with A. and M. College Prize Competition.

BY WALTER W. FINLEY, NORTH WILKESBORO, N. C.

When the earth was created and given to man—for his habitation in all the beauty and richness of its new-born nature, no harmful weed or unsightly thorn marred the perfect unity of a complete vegetable kingdom. Man was placed in a garden in which grew every pleasant plant, herb and tree, that was good for food. No tillage of any kind was necessary, no tools were used.

But man sinned, and then went forth that eternal decree, "By the sweat of thy face shalt thou eat bread." Since then man has been forced to practice some form of tillage, and in proportion as cultivation of crops has developed, tools and farming machinery of all kinds have been developed.

During long stages of development, primitive man subsisted mainly by hunting and eating wild fruits, but as the population of the world increased man was forced to rely for subsistence more and more on food raised by cultivation. Doubtless the first tools used were merely sharpened sticks, with which the ground was stirred. The seed were planted and covered by hand and, if a crop of fruit matured, it was harvested by hand and cleaned by treading with animals or by beating it out with sticks and pouring it out where the wind separated the chaff from the grain. Let us take a retrospective glance at the evolution of agricultural implements in reference to the three great cultivated crops: wheat, corn, and grass for hay.

### WHEAT HARVESTING.

The origin of wheat as a food is unknown. It is older than civilization and was probably used as food by our primitive ancestors long before they emerged from the obscurity of the ages. For more than forty centuries this golden cereal has been the staff of life for the nations. In the advancement of human welfare no cereal has been more instrumental than wheat. It has developed the mechanical ingenuity and other intellectual faculties of man. Without wheat, farms would be abandoned, cities would crumble into ruin and civilization would perish. The process of reaping wheat is older than written history. The hand sickle, for a time extending through centuries, reigned supreme.

Our earliest records are from Egyptian history. A tomb at Thebes probably built 1500 B. C., bears a painting which shows the various operation connected with the cultivation and harvesting of grain. Two men are represented with sickle-like implements, cutting the grain somewhat below the heads; behind them a third man, working alone, seems to be gleaning, while others carry the grain to oxen which are treading it out.

Among the remains of the later